



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,328	02/25/2000	Bruce W. Curtis	SUN1P701/P4732	7789

22434 7590 07/12/2004

BEYER WEAVER & THOMAS LLP

P.O. BOX 778

BERKELEY, CA 94704-0778

EXAMINER
----------

PRIETO, BEATRIZ

ART UNIT	PAPER NUMBER
----------	--------------

2142

DATE MAILED: 07/12/2004

22

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/513,328

Applicant(s)

BRUCE W. CURTIS

Examiner

B. Prieto

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 8-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. This communication is in response to amendment filed 4/19/04, claims 1-26 now remain pending, claims 1-7 and 24-26 have been examined.

2. For the purposes of examination and in view of applicant's arguments it is necessary to establish clearly on the record what is prior art and what are the inventive aspects of instant invention.

3. Admissions as Prior Art (see MPEP §2129). When applicant states that something is prior art, it is taken as being available as prior art against the claims. Admitted prior art can be used in obviousness rejections. In re Nomiya, 509 F.2d 566, 184 USPQ 607, >611< (CCPA 1975). In this case, Background of the Invention describes a conventional web server receiving HTTP request from a web browser (page 1, lines 25-page 2, line 7) illustrated on Figure 1, where within the web server the "HTTP request" received from the client's web browser are processed by a "HTTP daemon", which is a program or thread for handing HTTP request and that may transmit the request to other processes or program (see page 2, lines 8-16). Further it is discussed as prior art, that HTTP requests are typically handled by a kernel, which is part of the operating system and is responsible of forwarding request to the HTTP daemon (see page 2 lines 17-21), where the web server cache 106 has been implemented to response data (see page 4, lines 3-5).

4. Well know factual evidence made of record. The following reference is set forth as evidence for establishing inherency. An inherent property, function or ingredient of a prior art reference does not preclude a finding of anticipation. Atlas Powder Co. v. IRECO, Inc., 190 F.3d 1342, 1349, 51 USPQ2d 1943, 1948 (Fed. Cir. 1999). The Singh et. al. (US 5,805,809 9/1998) provides extrinsic evidence making it clear that and the term "cache system residing in the kernel" is readily apparent and common knowledge by persons of ordinary skill." Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). Note that as long as there is evidence of record establishing inherency, failure of those skilled in the art to contemporaneously recognize an inherent property, function or ingredient of a prior art reference does not preclude a finding of anticipation. Atlas Powder Co. v. IRECO, Inc., 190 F.3d 1342, 1349, 51 USPQ2d 1943, 1948 (Fed. Cir. 1999), see MPEP § 2112 - § 2112.02 for case law on inherency, furthermore the critical date of extrinsic evidence showing

Art Unit: 2142

a universal fact need not antedate the filing date, see MPEP § 2124. Singh discloses that: prior art cache systems for distributed file systems are inherently a part of the server operating system, for e.g. AFS, CODA and Sprite are all “built” or “compiled” into the UNIX kernel, where to obtain the benefits of such cache systems these can be either on the server-side and also on the client-side (column 2, lines 18-21).

### *Claim Rejection under 35 U.S.C. 101*

5. Claim 1 is rejected under 35 U.S.C. § 101, which reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 1 is rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. In this case, computer-related inventions whether descriptive or functionally descriptive material are non-statutory categories when claimed as descriptive material *per se* (see *Warmerdam*, 33 F.3d at 1360 USPQ2d at 1759), falling under the “process” category (i.e. inventions at that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b) (“The term process means, art, or method, and includes a new of a known process, machine, manufacture, composition of matter or material”). Functional descriptive material: “data structures” representing descriptive material *per se* or computer program representing computer listing *per se* when embodied in a computer-readable media are still not statutory because they are not capable of causing functional change in the computer. However, claimed computer-readable medium encoded with a data structure defined structural and functional interrelationships between the data structure and the computer software and hardware component, which permit the data structure’s functionality to be realized, and is thus statutory (see MPEP 2106).

### *Double Patent Rejection*

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 2142

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 25 and 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3,6, 7-8, 11-14 and 19 of U.S. Patent No. 6,668,279.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they both are directed to a cache residing in a kernel in a web server for servicing HTTP requests, where the request is serviced or not by the cache through interaction between a HTTP daemon and a process accessing the cache for transmission to the requesting client. The control of the cache is base on the same means that is a "preempt indicator "or" advisory state indicator states, as claimed in the patent and instant application, respectively.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2142

11. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over GOPAL et. al. (US Patent No. 6,163,812) (Copal hereafter) in view of BLUMENAU et. al (US Patent No. 6,260,120) (Blumenau hereafter).

Regarding claim 1, the Copal reference discloses substantial features of the invention as claimed, teaching a cache residing in a kernel level of the operating system within a server (Figs. 1 & 7, col 5/lines 61-col 6/line 3, 19-22, 25-27, col 7/lines 36-44 and con 10/lines 60-col 11/line 63);

receiving a request (col 7/lines 36-40 and col 9/lines 65-col 10/line 2);

determining whether response data to said request is in said cache (col 7/lines 36-44, 48-49, 53, col 9/lines 65-col 10/line 2); although Gopal teaches transmitting said response data associated with said request from the cache (col 7/lines 36-48 and col 12/lines 58-62); Gopal does not explicitly teach obtaining information associated with the request from the cache indicating whether or not permission from a processor is required.

Blumenau teaches a system/method related to data processing network including data storage system (col 1/lines 9-14) including an indication or flag ("advisory state") stored on the cache (col 14/lines 23-31, 53-60 and col 16/lines 45-59) which when set (first set) the private/shared flag indicated that all resources are private and no permission is need from a program (e.g. manager) before accessing any of the resources (col 15/lines 11-15), further including receiving a request and determining whether the response data associated with said request is in a cache storage subsystem 20 (col 8/lines 48-52, 59-60, col 8/line 66-col 9/line 3) residing on a main frame server (col 9/lines 25-29).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to given the teachings of Gopal for receiving an request, determining the response to said request is in a cache storage and transmitting said response data from said cache if determined stored therein to utilize Blumenau's teachings for managing access to files stored cache to which the host application is permitted to access. Motivation would be to discriminate among access request to cache files without unduly burden to said host, providing a method for transparently to any high level process that may be used by the host application for managing access to the cache access files to which the host application is permitted.

12. Claims 1-7 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes et. al. (Hayes) U.S. Patent No. 6,073,212 in view of Hunt U.S. Patent No. 6,192,398 in further view of BLUMENAU et. al. (Blumenau) U.S. Patent No. 6,260,120.

Regarding claim 1, Hayes teaches features of the invention substantially as claimed, teaching a system/method related to the management a cache memory system (abstract), including

- determining whether a cache copy or content (response data) associated with a request is in the cache (cache-hit: col 3/lines 25-30, cache content information, col 2/lines 29-33);

- obtaining an advisory state associated with the request from the cache associated with the determined existing cached copy or cached content (state col 6/lines 8-16);

- reading (retrieving) the response data in accordance with the advisory state associated with the request (col 6/lines 8-16); Hayes doesnot explicitly teach where the cache resides in a kernel;

Hunt teaches a system/method related to the management of a cache (124) in a cache memory system (col 3/lines 45-49) in a web server (116-118) (col 3/lines 30-44, 52-58, col 4/lines 46-48, Fig. 1), including:

- receiving a HTTP request (step 506, Fig. 5A, col 1/lines 32-42, col 6/lines 21-24);

- an indication ("state") indicating that the response data is stored or not in the ("HTTP") cache, including determining whether response data associated with the HTTP request is in the cache (step 508, Fig. 5A, col 6/lines 24-28);

- obtaining an advisory state associated with the HTTP request from the HTTP cache associated with the cached response (step 518 of Fig. 5A, col 6/lines 29-32, 54-61, step 510 of Fig. 5A);

- transmitting (loading) the response data in accordance with the advisory state associated with the HTTP request (Fig. 5B step 514); however the above mentioned prior art do not explicitly teach an advisory state indicating whether or not permission from a process need to be obtained;

Blumenau teaches a system/method related to data processing networks and data storage subsystems (col 1/lines 9-14), including a flag ("advisory state") which when set (first state) the private/shared flag indicates that all resources are private and no permission is needed from a lock manager before the host controller port can accessing any of the resources its assigned resource list (col 15/lines 11-15);

It would have been obvious to one ordinary skilled in the art at the time the invention was made to combine Hayes and Hunt's teachings utilizing advisory states which indicate the state of the cached copy, particularly an indication as to whether the response data can be accessed by consulting with other processor(s) or the response data can be accessed without consulting with other processor(s), enabling a web server hosting a cache memory system (residing in the kernel as well known in the art) for providing response data to HTTP request to obtain an advisory state indicating whether or not processors managing the cache memory system within the web server need to be enabled or instructed ("permitted") to access (e.g. reading/writing) in the cached data associated with the HTTP request, motivation would

Art Unit: 2142

be to provide state and tag information to quickly service request to cached data, minimizing read and write latency to the caches, as taught by Hayes. It further would have been obvious to one ordinary skilled given Hayes suggestion of improving intercommunication between multi-processing computer systems including communication between processors and caches to implement Blumenau's teachings between computer processes including a flag ("advisory") state indicating whether or not permission from a process need to be obtained, motivation would be mechanism transparent to any high-level system procedure and the alleviates the burden on the host computer process and the storage system in managing access to stored resources.

Regarding claim 2, when the response is cached, sending an advisory request to a processor or program (HTTP daemon), indicating an action to be taken with the response data, and receiving the advise state from the processor or program (HTTP daemon) (Hayes: col 6/lines 8-16, Hunt: col 6/lines 37-42).

Regarding claim 3, transmitting the response data without modifying the response data in the HTTP cache when the advise state is in a first state (Hayes: retrieving or read response data: col 6/lines 8-16) transmitting (loading) the response data in accordance with the advisory state associated with the HTTP request (Hunt: Fig. 5B step 514, col 6/lines 58-61).

Regarding claim 4, update (modifying) the response data stored in the HTTP cache as specified by the advise state (Hunt: Fig. 5B, step 514, col 6/lines 37-42).

Regarding claim 5, removing one response data and the advisory state from the HTTP cache when the advise state is in a second state (Hunt: col 6/lines 54-col 7/line 2, flush).

Regarding claim 6, receiving response data from the HTTP daemon; and performing replacing the received from the HTTP daemon in the HTTP cache and replacing the advisory state in the HTTP cache with a another state (Hunt: Fig. 5B, step 516).

Regarding claim 7, including limitations discussed on claim 1, and further transmitting the second response data when the advise state is in a fourth state without transmitting the response data in the HTTP cache and without storing the second response data in the HTTP cache (Hunt: col 7/lines 3-10).



Art Unit: 2142

Regarding claim 24, this claim comprises the computer-readable medium storing computer-readable instructions thereon, for performing the method discussed on claim 1, same rationale of rejection is applicable.

Regarding claim 25, this claim comprises the apparatus means for implementing the method described in claim 1, same rationale of rejection is applicable.

Regarding claim 26, this claim comprises the apparatus means including the processor and memory comprising the instruction that when executed by said processor implement the method described in claim 1, same rationale of rejection is applicable.

### *Response to arguments*

13. Regarding claim 1, it is argued that the Hayes reference does not teach an “HTTP cache in a “web server”, because the reference describes a “processor cache”.

In response to the above-mentioned argument, applicant’s interpretation of the reference is noted, however, according to applicant’s disclosure an “HTTP cache” is for example an in-kernel cache (see page 13, lines 5-18), given the broadest reasonable interpretation in light of the specification (see MPEP 2111), the term “HTTP cache” will be interpreted as a cache. Hayes teaches a multi-processor computer system having a hierarchy of cache units, a cache unit for each processor (col 1/lines 12-17), each processor services request associated with information in its cache (col 2/line 60-col 3/line 3). Hunt teaches where a remote shared file server caches pages in a common are for servicing browsers for different clients, the remote shared cache may form part of a local/remote hierarchy (abstract), web pages are cached on the shared file server (col 4/lines 46-57).

14. Regarding claim 1, it is argued that the Hayes reference does not teach requesting permission from a HTTP daemon.

In response to the above-mentioned argument that the references fail to show certain features of applicant’s invention, it is noted that the features upon which applicant relies (i.e., “requesting permission from a HTTP daemon”) are not recited in the rejected claim 1. This is not a suggestion of any sort. Furthermore, although the claims are interpreted in light of the specification, limitations from the

Art Unit: 2142

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

15. Regarding claim 1, it is argued that the Hayes reference does not teach managing HTTP cache in a web server.

In response to applicant's argument that reference does not teach managing HTTP cache in a web server, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

16. Regarding claim 1, it is argued that the Hunt reference does not teach a cache memory in a web server because it describes a "browser cache".

In response to applicant's argument that the reference does not teach a cache in a server, because it teaches a browser cache. It is noted that the Hunt reference explicitly suggest, that the cache may be configured to reside on a server for caching web pages, i.e. a "web server" (see col 4/lines 46-57).

17. Regarding claim 1, it is argued that the Blumenau et. al. reference does not relate to HTTP request and does not teach managing HTTP cache in a web server.

In response to applicant's argument that reference does not teach managing HTTP cache in a web server, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, in response to applicant's argument that the Blumenau et. al. reference is not pertinent or analogous art, it is noted that the field of invention of instant application, broadly speaking relates to data storage systems (e.g. cache memory) (see disclosure page 1, lines 23-25), thereby it is pertinent to applicant's invention.

Art Unit: 2142

18. Applicant's arguments filed 04/19/04 have been fully considered but not rendered persuasive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Jack B. Harvey can be reached on (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this action should be mailed to:  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to the Central Fax Office:

(703) 872-9306, for Official communications and entry;

Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Fourth Floor (Receptionist), further ensuring that a receipt is provided stamped "TC 2100".



B. Prieto  
TC 2100  
Patent Examiner  
June 27, 2004